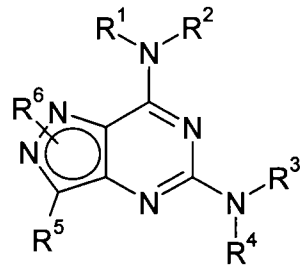
Amendments to the Claims

1. (Currently amended) A compound of formula (I)



(I)

wherein

R^1 is a cyclic group selected from R^A, R^B, R^C and R^D, each of which is optionally substituted with one or more R^7 groups;

R^2 is hydrogen or C_1-C_2 alkyl;

R^3 and R^4 are each independently C_1-C_8 alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl or C_3-C_{10} cycloalkyl, each of which is optionally substituted with one or more R^8 groups, or R^E, which is optionally substituted with one or more R^9 groups, or hydrogen;

or $-NR^3R^4$ forms R^F, which is optionally substituted with one or more R^{10} groups;

R^5 is -Y-$CONR^{15}R^{16}$;

R^6, which may be attached at N^1 or N^2, is C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_2-C_6 alkenyl or C_2-C_6 alkynyl, each of which is optionally substituted by C_1-C_6 alkoxy, C_1-C_6 haloalkoxy or a cyclic group selected from R^J, R^K, R^L and R^M, or R^6 is R^N, C_3-C_7 cycloalkyl or C_3-C_7 halocycloalkyl, each of which is optionally substituted by C_1-C_6 alkoxy or C_1-C_6 haloalkoxy, or R^6 is hydrogen;

R^7 is halo, C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_{10} cycloalkyl, C_3-C_{10} halocycloalkyl, phenyl, OR^{12}, $OC(O)R^{12}$, NO_2, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, CO_2R^{12}, $CONR^{12}R^{13}$ or CN;

R^8 is halo, phenyl, C_1-C_6 alkoxyphenyl, OR^{12}, $OC(O)R^{12}$, NO_2, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, CO_2R^{12}, $CONR^{12}R^{13}$, CN, R^G or R^H, the last two of which are optionally substituted with one or more R^9 groups;

R^9 is C_1-C_6 alkyl, C_1-C_6 haloalkyl or CO_2R^{12};

R^{10} is halo, C_3-C_{10} cycloalkyl, C_3-C_{10} halocycloalkyl, phenyl, OR^{12}, $OC(O)R^{12}$, NO_2, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, CO_2R^{13}, $CONR^{12}R^{13}$, CN, oxo, C_1-C_6 alkyl or C_1-C_6 haloalkyl, the last two of which are optionally substituted by R^{11};

R^{11} is phenyl, $NR^{12}R^{13}$ or $NR^{12}CO_2R^{14}$;

R^{12} and R^{13} are each independently hydrogen, C_1-C_6 alkyl or C_1-C_6 haloalkyl;

R^{14} is C_1-C_6 alkyl or C_1-C_6 haloalkyl;

R^{15} and R^{16} are each independently selected from
- hydrogen,
- C_1-C_6 haloalkyl,
- C_1-C_6 alkyl optionally substituted with
  - R^{17},
  - $-NR^{18}R^{19}$,
  - $-CO_2R^{20}$,
  - $-CONR^{21}R^{22}$,
  - R^{23} or
  - phenyl optionally substituted by
    - halo,
    - C_1-C_6 alkyl or
    - R^{17},
- C_3-C_7 cycloalkyl optionally substituted with
  - C_1-C_6 alkyl,
  - R^{17} or
  - $-NR^{18}R^{19}$, and
- R^{23};

or $NR^{15}R^{16}$ ~~constitutes~~ <u>are taken together to form</u> a 3- to 8-membered ring ~~which may~~ optionally ~~include~~ <u>containing</u> one or more further heteroatoms selected from nitrogen, oxygen and sulphur, and which may optionally be further substituted with R^{17}, C_1-C_6 haloalkyl, $-CO_2R^{20}$, $-CONR^{21}R^{22}$, oxo or C_1-C_6 alkyl optionally substituted by R^{17};

R^{17} is hydroxy, C_1-C_6 alkoxy, C_1-C_6 (haloalkyl)oxy or C_3-C_7 cycloalkyloxy;

R^{18} and R^{19} are each independently selected from hydrogen and C_1-C_6 alkyl;

or -$NR^{18}R^{19}$ ~~constitutes~~ are taken together to form an azetidine, pyrrolidine, piperidine or morpholine ring;

R^{20} is hydrogen or C_1-C_6 alkyl;

R^{21} and R^{22} are each independently selected from hydrogen, C_1-C_6 alkyl, C_1-C_6 haloalkyl and C_3-C_7 cycloalkyl;

or -$NR^{21}R^{22}$ ~~constitutes~~ are taken together to form a 3- to 8-membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen, oxygen and sulphur;

R^{23} is a saturated 3- to 8-membered ring ~~which includes~~ containing at least one heteroatom selected from nitrogen, oxygen and sulphur, which ring may optionally be substituted by one or more C_1-C_6 alkyl groups, provided that the group R^{23} is joined to the parent molecule by a covalent bond to a carbon atom of said ring;

R^A and R^J are each independently a C_3-C_{10} cycloalkyl or C_3-C_{10} cycloalkenyl group, each of which may be either monocyclic or, when there are an appropriate number of ring atoms, polycyclic and which may be fused to either

(a) a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

R^B and R^K are each independently a phenyl or naphthyl group, each of which may be fused to

(a) a C_5-C_7 cycloalkyl or C_5-C_7 cycloalkenyl ring,

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(c) a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

R^C, R^L and R^N are each independently a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated or partly unsaturated ring system containing between 3 and 10 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur, which ring may be fused to a C_5-C_7 cycloalkyl or C_5-C_7 cycloalkenyl group or a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

R^D and R^M are each independently a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms independently selected from nitrogen, oxygen and sulphur, which ring may further be fused to

(a) a second 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

(b) C_5-C_7 cycloalkyl or C_5-C_7 cycloalkenyl ring;

(c) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur; or

(d) a benzene ring;

R^E, R^F and R^G are each independently a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated ring system containing between 3 and 10 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

R^H is a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms independently selected from nitrogen, oxygen and sulphur; and

Y is a covalent bond, C_1-C_6 alkylenyl or C_3-C_7 cycloalkylenyl;

a tautomer thereof or a pharmaceutically acceptable salt~~, solvate or polymorph~~ of said compound or tautomer.

2. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein R^1 is R^A, which is optionally substituted with one or more R^7 groups; and

R^A is a C_3-C_{10} cycloalkyl group, which may be either monocyclic or, when there are an appropriate number of ring atoms, polycyclic, which may be fused to either

(a) a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur.

3. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein R^1 is R^B, R^C, or R^D each optionally substituted with one or more R^7 groups, wherein

R^B is phenyl,

R^C is a monocyclic saturated or partly unsaturated ring system containing between 5 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur,

R^D is furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, isothiazolyl, thiazolyl, oxadiazolyl, pyridyl, pyridazinyl, pyrimidyl or pyrazinyl, and

R^7 is fluoro, methyl, ethyl, hydroxy, methoxy, propoxy or CONHMe.

4. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein R^2 is hydrogen or methyl.

5. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein ~~1 to 4 wherein~~ R^3 is hydrogen or C_1-C_4 alkyl, which is optionally substituted with one or more R^8 groups, or R^3 is azetidinyl, pyrrolidinyl or piperidinyl, each of which is optionally substituted with one or more R^9 groups, wherein

R^8 is hydroxy, methoxy, methoxyphenyl, NH_2, NHMe, NMe_2, $NHCO_2{}^tBu$, $NMeCO_2{}^tBu$, CO_2H, CONHMe, pyrrolidinyl, piperidinyl, morpholinyl or pyrazolyl, the last four of which are optionally substituted with one or more R^9 groups, and

R^9 is methyl or $CO_2{}^tBu$.

6. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 5~~ wherein R^4 is hydrogen, methyl or ethyl.

7. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 6~~ wherein $-NR^3R^4$ forms R^F, which is optionally substituted with one or more R^{10} groups, wherein

R^F is selected from azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, 3-azabicyclo[3.1.0]hex-3-yl, homopiperazinyl, 2,5-diazabicyclo[4.3.0]non-2-yl, 3,8-diazabicyclo[3.2.1]oct-3-yl, 3,8-diazabicyclo[3.2.1]oct-8-yl, 1,4-diazabicyclo[4.3.0]non-4-yl and 1,4-diazabicyclo[3.2.2]non-4-yl, and

R^{10} is halo, methyl, ethyl, isopropyl, hydroxy, methoxy, NH_2, NHMe, NMe_2, $NHCO_2{}^tBu$, CO_2H, $CO_2{}^tBu$, oxo, benzyl, $-CH_2NH_2$, $-CH_2NHMe$, CH_2NMe_2 or $-CH_2NMeCO_2{}^tBu$.

8. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 7~~ wherein

R^{15} and R^{16} are each independently selected from hydrogen, C_1-C_6 alkyl optionally substituted with R^{17}, $-NR^{18}R^{19}$, $-CO_2R^{20}$, $-CONR^{21}R^{22}$, R^{23} or phenyl optionally substituted by halo, C_1-C_6 alkyl or R^{17}, C_3-C_7 cycloalkyl and R^{23}, or $NR^{15}R^{16}$ ~~constitutes~~ are taken together to form a 5- to 7-membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen and oxygen, and which may optionally be further substituted with R^{17}, $-CO_2R^{20}$, $-CONR^{21}R^{22}$ or C_1-C_6 alkyl optionally substituted by R^{17};

R^{17} is hydroxy, C_1-C_6 alkoxy or C_3-C_7 cycloalkyloxy;

R^{21} and R^{22} are each independently selected from hydrogen, C_1-C_6 alkyl, and C_3-C_7 cycloalkyl, or $-NR^{21}R^{22}$ ~~constitutes~~ are taken together to form a 5- to 8-

membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen and oxygen; and

R^{23} is a saturated 5- to 7-membered ring ~~which includes~~ containing at least one heteroatom selected from nitrogen and oxygen, which ring may optionally be substituted by one or more C_1-C_6 alkyl groups.

9. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 8~~ wherein R^6 is positioned on N^1.

10. (Currently amended) A compound according to claim 9, or a pharmaceutically acceptable salt thereof, wherein R^6 is hydrogen, methyl, ethyl, isopropyl, isobutyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, propoxyethyl, 2,2,2-trifluoroethyl, tetrahydrofuranylmethyl, tetrahydropyranylmethyl, tetrahydropyranyl or pyridinylmethyl.

11. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein

R^1 is a cyclic group selected from R^A, R^B, R^C and R^D, each of which is optionally substituted with one or more R^7 groups;

R^7 is halo, C_1-C_6 alkyl, C_1-C_6 haloalkyl, OR^{12} or $CONR^{12}R^{13}$;

R^8 is halo, phenyl, C_1-C_6 alkoxyphenyl, OR^{12}, $NR^{12}R^{13}$, $NR^{12}CO_2R^{14}$, CO_2R^{12}, $CONR^{12}R^{13}$, R^G or R^H, the last two of which are optionally substituted with one or more R^9 groups;

R^A is a monocyclic C_5-C_7 cycloalkyl group;

R^B is phenyl;

R^C is a monocyclic saturated ring system containing between 5 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

R^D is a 5-membered heteroaromatic ring containing a heteroatom selected from nitrogen, oxygen and sulphur and optionally up to two further nitrogen atoms in the ring, or a 6-membered heteroaromatic ring including 1, 2 or 3 nitrogen atoms;

R^E is a monocyclic saturated ring system containing between 3 and 7 ring atoms containing one nitrogen atom;

R^F is a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated ring system containing between 3 and 10 ring atoms containing at least one nitrogen atom and optionally one other atom selected from oxygen and sulphur;

R^G is a monocyclic saturated ring system containing between 3 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur; and

R^H is a 5- or 6-membered heteroaromatic ring containing up to two nitrogen atoms.

R^3 is hydrogen, C_1-C_4 alkyl, which is optionally substituted with one or more R^8 groups, or R^E, which is optionally substituted with one or more R^9 groups;

R^4 is hydrogen, C_1-C_6 alkyl or C_1-C_6 haloalkyl;

or $-NR^3R^4$ forms R^F, which is optionally substituted with one or more R^{10} groups;

R^6 is C_1-C_4 alkyl or C_1-C_4 haloalkyl, each of which is optionally substituted by C_1-C_4 alkoxy, C_1-C_4 haloalkoxy or a cyclic group selected from R^J, R^L and R^M, or R^6 is R^N or hydrogen;

R^J is cyclopropyl or cyclobutyl;

R^L and R^N are each independently a monocyclic saturated ring system containing either 5 or 6 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

R^M is a 5- or 6-membered heteroaromatic ring containing a heteroatom selected from nitrogen, oxygen and sulphur; and

Y is a covalent bond.

12. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, selected from:

1-(2-ethoxyethyl)-*N*-ethyl-5-(ethylamino)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-(methylamino)ethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-*N*-(2-(dimethylamino)ethyl)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-*N*-(piperidin-4-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-methoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

(2*R*)-2-{[5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carbonyl]amino}propionic acid,

3-{[5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carbonyl]amino}propionic acid,

1-(2-ethoxyethyl)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-5-(piperazin-1-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-methyl-5-((3*R*)-3-methylpiperazin-1-yl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-ethyl-5-((3*R*)-3-methylpiperazin-1-yl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(ethylamino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-(2-methoxyethyl)-5-(methylamino)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-hydroxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(ethylamino)-*N*-(2-methoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(*N*-(2-hydroxyethyl)-*N*-methylamino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-((2-methoxyethyl)amino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

7-(cyclohexylamino)-1-(2-ethoxyethyl)-*N*-methyl-5-((3*R*)-3-methylpiperazin-1-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide, and

1-(2-ethoxyethyl)-*N*-methyl-5-[*N*-methyl-*N*-((3*S*)-1-methylpyrrolidin-3-yl)amino]-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide

and tautomers thereof and pharmaceutically acceptable salts, solvates and polymorphs of said compound or tautomer.

13. (Original) A pharmaceutical composition comprising a compound of ~~formula (I) as claimed in any one of claims 1 to 12~~ claim 1, or a pharmaceutically acceptable salt ~~salts, solvates or polymorphs~~ thereof, and a pharmaceutically acceptable diluent or carrier.

14. – 15. (Canceled)

16. (New) A method of treating a disease, disorder or condition in a mammal, said method comprising administering to said mammal in need thereof a therapeutically effective amount of a compound of claim 1, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition comprising a compound or claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable diluent or carrier, wherein said disease, disorder or condition is male erectile disorder or pulmonary hypertension.